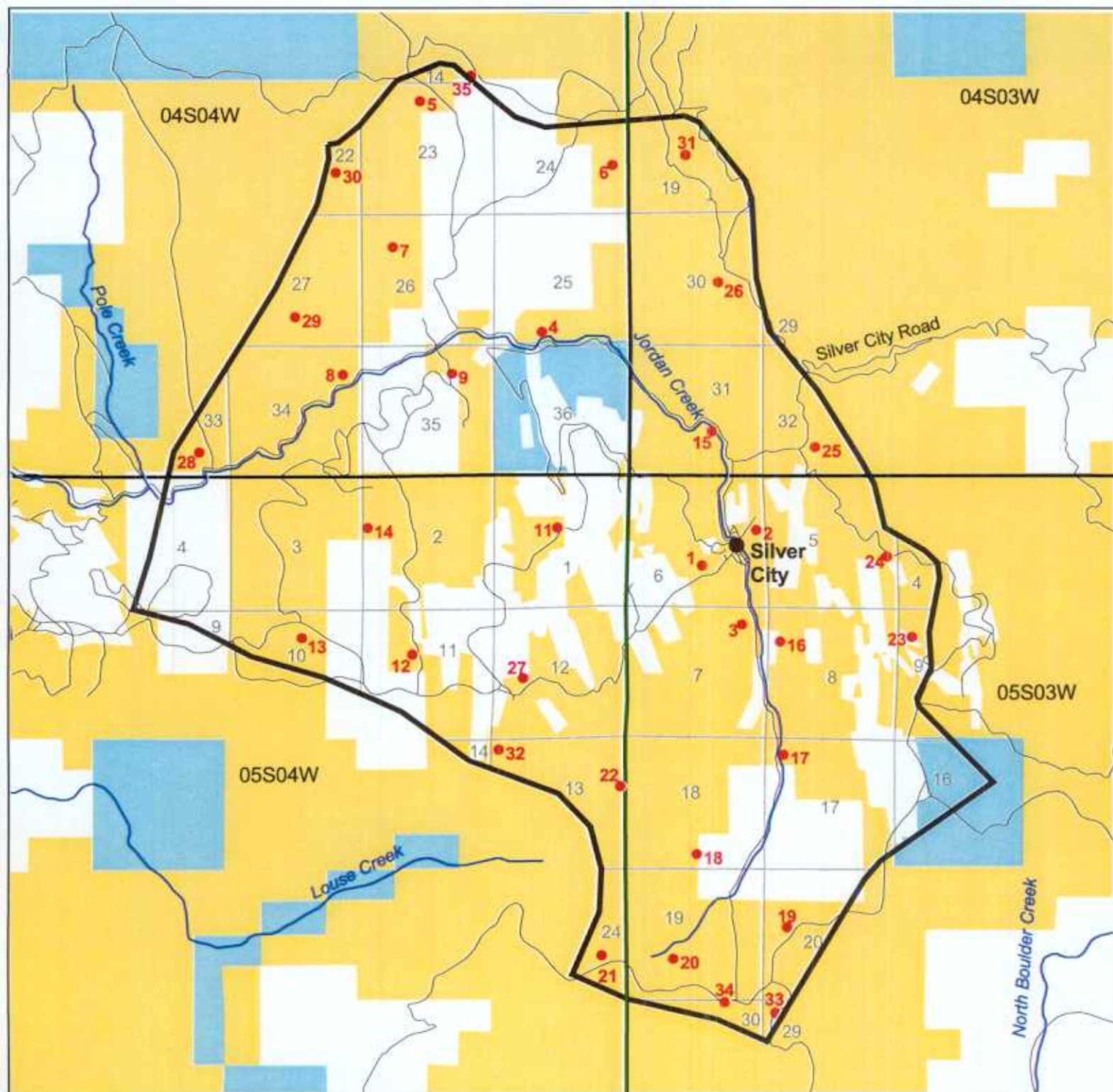


Appendix A: Maps



Map 1: Map of Silver City Assessment Area and Fuel Survey Points

Date: December 2001

Scale:
1 0 1 Miles

DYNAMAC
CORPORATION
Environmental Services



Legend:

● Actual Assessment Point

▭ Assessment Area

▬ River

▬ Road

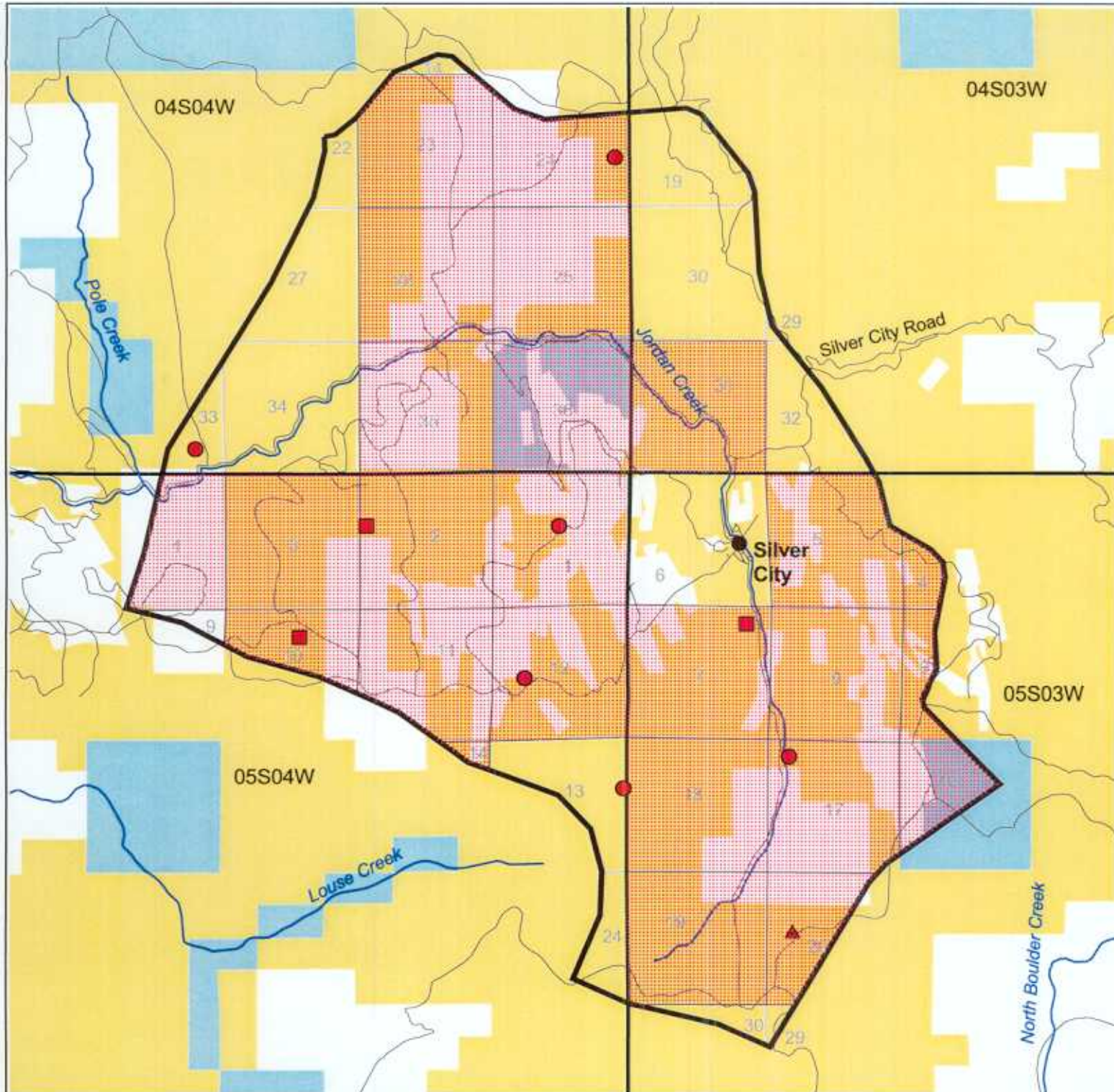
Ownership:

▭ Private

▭ Bureau of Land Management

▭ State of Idaho

▭ Open Water



Map 2: Highest Risk Areas for Fuel and Fire Suppression within the Silver City Assessment Area

Date: December 2001

Scale:
1 0 1 Miles

DYNAMAC
CORPORATION
Environmental Services



Legend:

- Assessment Area
- River
- Road

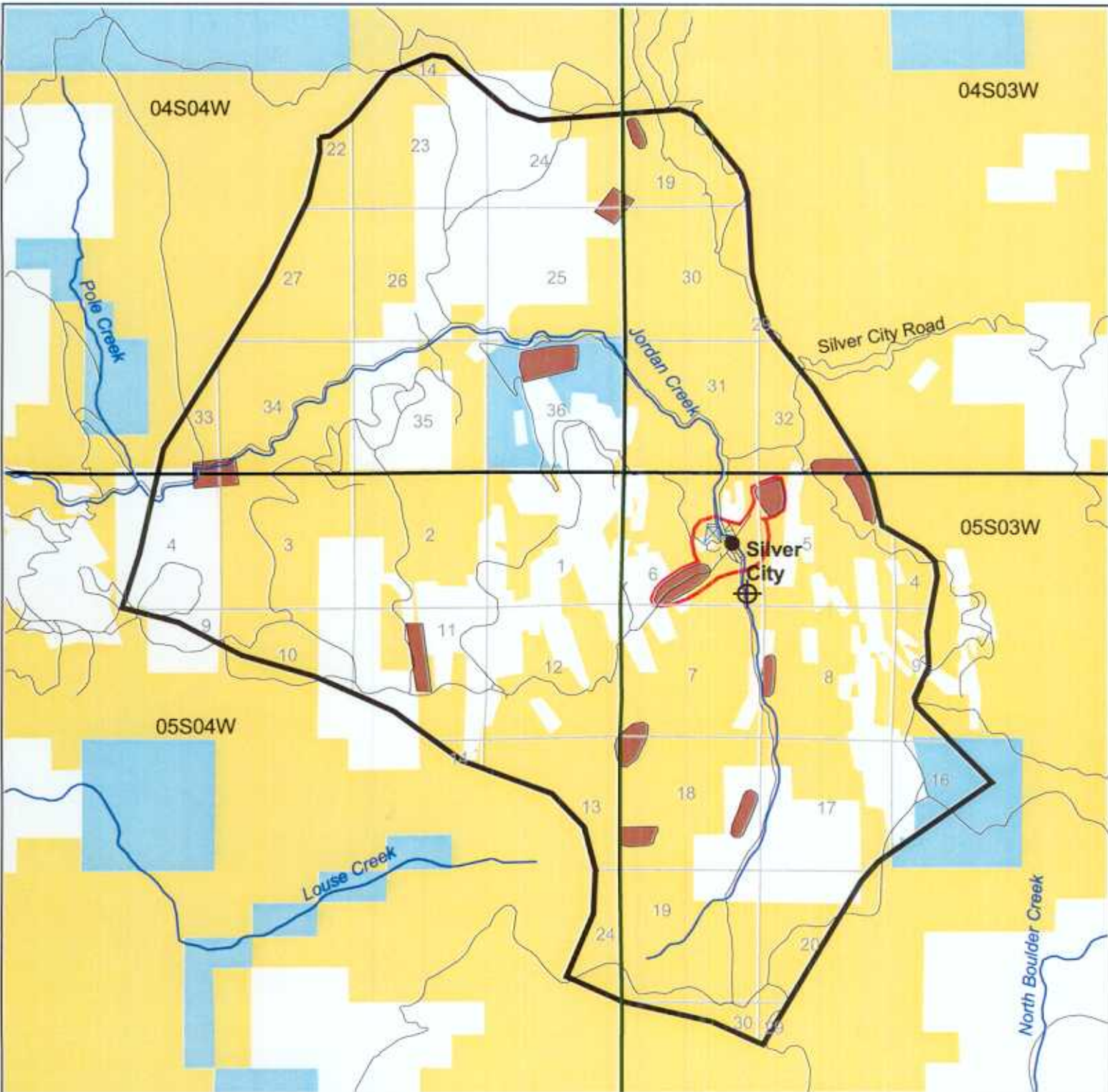
Ownership:

- Private
- Bureau of Land Management
- State of Idaho
- Open Water

Highest Risk Fuel Areas within the Assessment Area

High Risk Fuel Areas within the Assessment Area

Highest Risk to Fire Suppression Areas (Low Structure Density) within the Assessment Area



Map 3: Proposed Mitigation Projects in the Silver City Assessment Area

Date: December 2001

Scale: 1 0 1 Miles

DYNAMAC
CORPORATION
Environmental Services



Legend:

- Assessment Area
- River
- Road
- Dying Stand of Douglas Fir

Ownership:

- Private
- Bureau of Land Management
- State of Idaho
- Open Water

Mitigation:

- Jordan Creek Ice Pond
- Fuel Reduction Area

Appendix B: Structure Protection Plan

STRUCTURE PROTECTION PLAN: SILVER CITY, IDAHO

Prepared 30 August 2001 by Lower Snake River District BLM

INTRODUCTION AND HISTORY

In late August 2001, the historic township of Silver City was threatened by the Rough Diamond fire, which encroached within 3 miles of the town's northern border. An Imminent Threat Response was drafted to enable firefighters to take effective measures to protect the century and a half old town. Akin to most mining communities in the Intermountain west, Silver City is a series of wooden buildings, many constructed immediately adjacent to another. The forest of the surrounding hills was the source for the building material, resulting in clear-cutting and what is now century-old second growth. Based on local knowledge and historical documents, there is no account of wildfire in the town's history.

Silver City is now a tourist destination and is a historical site managed by the BLM while the buildings themselves are owned by numerous private parties. This historical site status affects fire mitigation in two significant ways: disturbing the ground requires dire circumstances and any modification to structures must be implemented with paramount importance placed on historical consideration.

SILVER CITY FIRE PROTECTION

Silver City is an unincorporated community and has an informal fire protection plan oriented primarily to protection from structural fire. There is a four inch diameter hydrant system tied into the domestic water supply and installed within the past few decades with 16 hydrants and a 65 psi rating drawing from a 30,000 gallon tank on the hillside northwest of town which currently has a 4gpm spring-fed recharge rate (roughly four days to completely refill). There is speculation that this recharge rate could be improved with the existing water source.

The following is an inventory of fire protection equipment as of August 2001:

- 150 gallon brush truck
- 35gpm @ 225 psi trailer mounted pump
- Two portable pumps of unknown status
- 1300' of 1 ½" hose [c. 1985]
- 30' of draft hose
- 2000' 1 ½" hose
- 16 nozzles [nozzles, backboards, turnouts]

The Student Conservation Association (SCA) and a BLM-contracted urban interface fire mitigator, Dynamac Corp., both have made assessments of Silver City in 2001, however that information was not available at the time this document was being produced.

ACTION PLAN

A thorough initial size-up was conducted and the following section details the essence of this document: an imminent threat response. Liberties have been taken for brevity's sake.

Escape Routes

1. Silver City RD. to Delmar, Jordan Valley and Murphy
2. Silver Cord; to War Eagle Mountain (Road improvement needed)

Safety Zones

(map on file with BLM)

1. Delmar Mine: NW of town, air access only
2. Upper Long Gulch Road loading pen, hill west of town: N.43°00.894 min, W.116°44.159 min
3. Banda City, south of town: N.43°00.296min, W.116°43.776 min

Helispots

(map on file with BLM)

1. Junction to Jordan Valley, north of town: N.43°01.591 min, W116°44.003 min
2. Behind Hyslop home, hill east of town: N.43°01.067 min, W116°43.820 min
3. Intersection of Jordan and 2nd Streets, south of town center: N.43°00.936 min, W.116°43.897 min
4. Banda City, south of town: N.43°00.296min, W.116°43.776min
5. Upper Long Gulch Road loading pen, hill west of town: N.43°00.894, W.116°44.159

Communications

1. Cellular Phones. Many residents utilize AT&T service.
2. Silver City Magneto Telephone System. 26 units in town serve as intercom system.
3. Notification process. Homeowners' association should annually confirm contacts with Owyhee County Sheriff and BLM to advise on local contact personnel. (See attached contact list)

Dip Sites

1. (4 mi W) Beaver Ponds in Rich Gulch
2. (2 mi E) Linehan Flat Pond on War Eagle Mountain

Fill Sites

1. Culvert under Jordan Street: either from spill pool or upstream of checkboard gate
2. North end of Morning Star Mill Street (mine shaft water; Improvements needed)
3. Creek below powder houses north of town

Structure Protection

1. A strike team of engines (3-Type IV and 2-Type III, all 4WD) plus two tactical water tenders and 1-20 person hand crew.

Engines

- #1: division 1 (per attached map [map #?]) amidst homes under Mayfield Mine
- #2: division 5 above Morning Street north of school
- #3: division 2 at house southwest of cemetery NW of town
- #4: division 8 at end of Long Gulch Road
- #5: division 9 at intersection of 2nd and Clinton St.

Tenders

- #1-At campground, south end of town
- #2-West side of Jordan Street, north of Jordan Creek (NW of land bridge)

2. Hose Lays

- #1-1 ½" trunk line from Mayfield Mine water source to intersection of Jackson and Morning Star Streets with 4 laterals (600' of 1 ½", 600' of 1")
- #2-Utilize hydrant system for western half of town [materials undetermined]

Firing Operations

- Begin on Jordan Creek burning westward to Cemetery Road. From Cemetery Road burn west to white house with red roof while pre-treating and protecting house with existing hydrant.
- Burn around house and tie into Long Gulch Road to the south.
- Using Long Gulch Road as the break continue to aspen stand. Protect red house.
- Anchoring from red house, construct hand line south to Potosi mine.
- Burn to white and yellow house.
- Continuing west, use road to white house with yellow trim. Prep road as needed. Burn south perimeter of house.
- Construct hand line past brown house to Jordan Street.

Develop Morning Star Mine as water resource

Recommendation is to install an electric submersible pump such that it can reach sufficient depth [to be determined]. In recent history, there was an attempt to drain the mine. After a month of operating a pump around the clock, efforts were abandoned. This is anecdotal evidence of the mine's potential to supply water and encourages further research. Pump unit, including cable should demand less than 4,000 watts so that any number of gas-powered generators already in town could supply power. Also, a 4,000-gallon tank would facilitate expedient filling of engines and tenders. Negotiations with mine owner and water resource official required. There exists an offer from the Hyslop/Miller family to ensure maintenance of pump.

WILDLAND/URBAN INTERFACE WATCH OUT as they pertain to Silver City

1. All buildings are of wooden construction. To their benefit, all roofs are metal. One issue noted is that many buildings are built on piers such that the undersides are exposed with fuel growing up to, and under the buildings.
2. Currently, Silver City is bottlenecked by the one road in or out of town to the north. Within town there is enough places to position engines and collapsible water tanks.
3. The domestic water supply provides 65 psi to the 3" hydrant system with a 30,000-gallon reserve, which requires roughly 4 days to refill. Two mineshafts are recognized to be potential water sources. Jordan Creek runs through town at 40 gpm by late August. Remnants of damming at the upper ice pond south of town could be built upon to provide a small reservoir for drafting and/or dipping.
4. The prevalence of natural fuels adjacent to buildings is an evident hazard in Silver City. Seventy percent of buildings do not have adequate fuel breaks in their perimeters. Without electricity, the town relies heavily on propane. All occupied buildings have propane tanks above ground. Many buildings have wood or scrap piles within a hazardous range.
5. Extreme fire behavior was recognized on the Rough Diamond fire nearby. Insect kill of juniper trees creates a significant threat in combination with low fuel moisture in 10- and 100-hour fuels. Local topography lends itself to extreme fire behavior.
6. Silver City has few permanent residents so evacuation wouldn't pose a great challenge. Limited access out of town (one road) is mitigated by the existence of safety zones noted in this document.
7. There are only a few hillside homes and they are in light fuels. Silver City has steep slopes (30 percent or greater) on all sides with narrow gulches and flashy fuels.
8. There are two bridges in town with load limits excluding their use by fire engines; however, there are alternate routes to the areas served by these bridges.

CONCLUSION

Silver City, Idaho has a significant wildfire threat—that has been evident since the second growth of trees on the surrounding hillsides after being logged during the town's boom in the latter half of the 19th century. What has emerged during the summer of 2001 is an understanding of prevention required and tactics suggested to mitigate the hazard of fire rolling into this valley or originating from within. In summary, the following are the main points for short-term defensibility of Silver City:

- *Reduction of lights fuels around homes and between buildings in the heart of town;
- *Concise plan of attack for a strike team of engines including dip spots and safety zones;
- *Ensure a sufficient water source including exploring the Morning Star mine option;
- *Predetermined hose lay routes and the quantity of hose required to execute said lays.

This study of Silver City in regards to wildfire hazard took the narrow focus of outlining actions that could be taken by an engine strike team with a limited amount of time in the face of an approaching fire. A comprehensive survey of long-term fire threat reduction is needed and apparently is in the works with SCA and Dynamac having surveyed the town.

Silver City has been fortunate to have not fallen victim to wildfire in its century and a half. The fire of August 2001 has provided the impetus for research and communication; may the commitment of both the homeowners and the BLM to mitigate wildfire hazard not cool with the embers of Rough Diamond.

Recommended Pre-order List

- 3 - Type IV engines, 4WD
- 2 - Type III engines, 4WD
- 2 - Tactical water tenders

- 1 - Type II hand crew, 20 person

- 4 - Mark III pump kits
- 20 - 5-Gallon class A foam containers
- 20 - Sprinkler kits
- 30 - Rolls structure wrap
- 1000 feet of 1-inch hose
- 1000' - 1 ½" hose
- 6 - 1 ½" x 1 ½" x 1 ½" gated wye
- 6 - 1 ½" x 1" reducer
- 8 - 1" nozzle (KK)
- 2 - 1 ½" nozzle (KK)
- 4 - 1" x 1" x 1" gate wye
- 1000' - 1" x ¾" hose, garden
- 10 - ¾" gated wye
- 8 - ¾" nozzle

(List of Silver City Homeowners Omitted. See Hazard Assessment Report,
Appendix D, for a List of Homeowners and interested parties.)